

Appl. S.N. 10/699,456  
Amdt. dated June 29, 2006  
Reply to Office Action of April 18, 2006  
Docket No. 100200584-1

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### REMARKS

The Office Action of April 18, 2006 has been received and carefully reviewed. It is submitted that, by this Amendment, all bases of rejection and objection are traversed and overcome. Upon entry of this Amendment, claims 1-20, 48 and 49 remain in the application. Claims 21-47 and 50-64 are cancelled without prejudice herein. Claims 65-67 have been added in order to set forth additional specific embodiments of Applicants' invention. Reconsideration of the claims is respectfully requested.

At the outset, Applicants' below-listed Attorney would like to sincerely thank Examiners O'Neill and Crepeau for all the time and courtesies extended during the personal interview of June 23, 2006. During the interview, the Wang reference was discussed, as well as proposed claim amendments and proposed new claims. The Examiners suggested further defining the film in claim 1.

Claims 1-20, 48 and 49 stand rejected under 35 USC 102(e) as being anticipated by Wang et al. (US Patent No. 2005/0053826). The Examiner states that Wang discloses a fuel cell having a substrate (e.g., an electrolyte, a current collector, an electrode), and a thin film catalyst deposited onto carbon nanotubes, which are deposited on the substrate. The Examiner also points out that the plurality of nanotubes enhances the catalytic activity and conductivity of the film and increases the number of sites per unit volume where catalysis takes place.

Applicants have amended independent claims 1, 48 and 49 to recite that the film is a patterned film, and that the plurality of nanowires is dispersed throughout the patterned film. Support for these recitations may be found throughout the specification as filed, at least at page 2, line 15 and at page 7, lines 12-30. Wang neither discloses a patterned film, nor that the nanowires are dispersed throughout the patterned film. Wang teaches that the film is "applied to the nanoparticles" via methods which include electro-depositing the thin film on the nanoparticles, spraying the nanoparticles with the thin film, conventional semiconductor processes (e.g., sputtering, chemical vapor deposition (CVD), molecular beam epitaxy (MBE),

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plasma-assisted vapor deposition, etc.), and exposing the nanoparticles to a solvent and allowing the solvent to evaporate (see paragraph [0062]).

It is submitted that none of the Wang techniques result in a **patterned** film having the nanowires dispersed therein, as recited in Applicants' amended independent claims. As such, it is submitted that Applicants' invention as defined in independent claims 1, 48, 49, and those claims depending therefrom is not anticipated, taught or rendered obvious by Wang, either alone or in combination, and patentably defines over the art of record.

Support for new claims 65-67 may be found throughout the specification as filed. More specifically, specification support for:

- claim 65 (directed to a single chamber fuel cell) may be found at least at page 10, lines 8-9 and lines 29-31;
- claim 66 (directed to the plurality of nanowires connected to catalytic nanoparticles and/or electrolyte grains) may be found at least at page 9, lines 7-16; and
- claim 67 (directed to each of the plurality of nanowires being formed from electrolyte filament materials, with cathode material nanoparticles being dispersed on and connected to the electrolyte filament material nanowires) may be found at least at page 8, lines 26-32.

In summary, claims 1-20, 48 and 49 remain in the application. New claims 65-67 have been added. It is submitted that, through this amendment, Applicants' invention as set forth in these claims is now in a condition suitable for allowance.

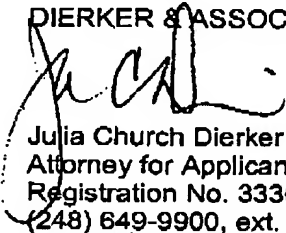
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Further and favorable consideration is requested. If the Examiner believes it would expedite prosecution of the above-identified application, she is cordially invited to contact Applicants' Attorney at the below-listed telephone number.

Respectfully submitted,

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